



Task XIX

'Micro Demand Response & Energy Saving'

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Task XIX – An Overview

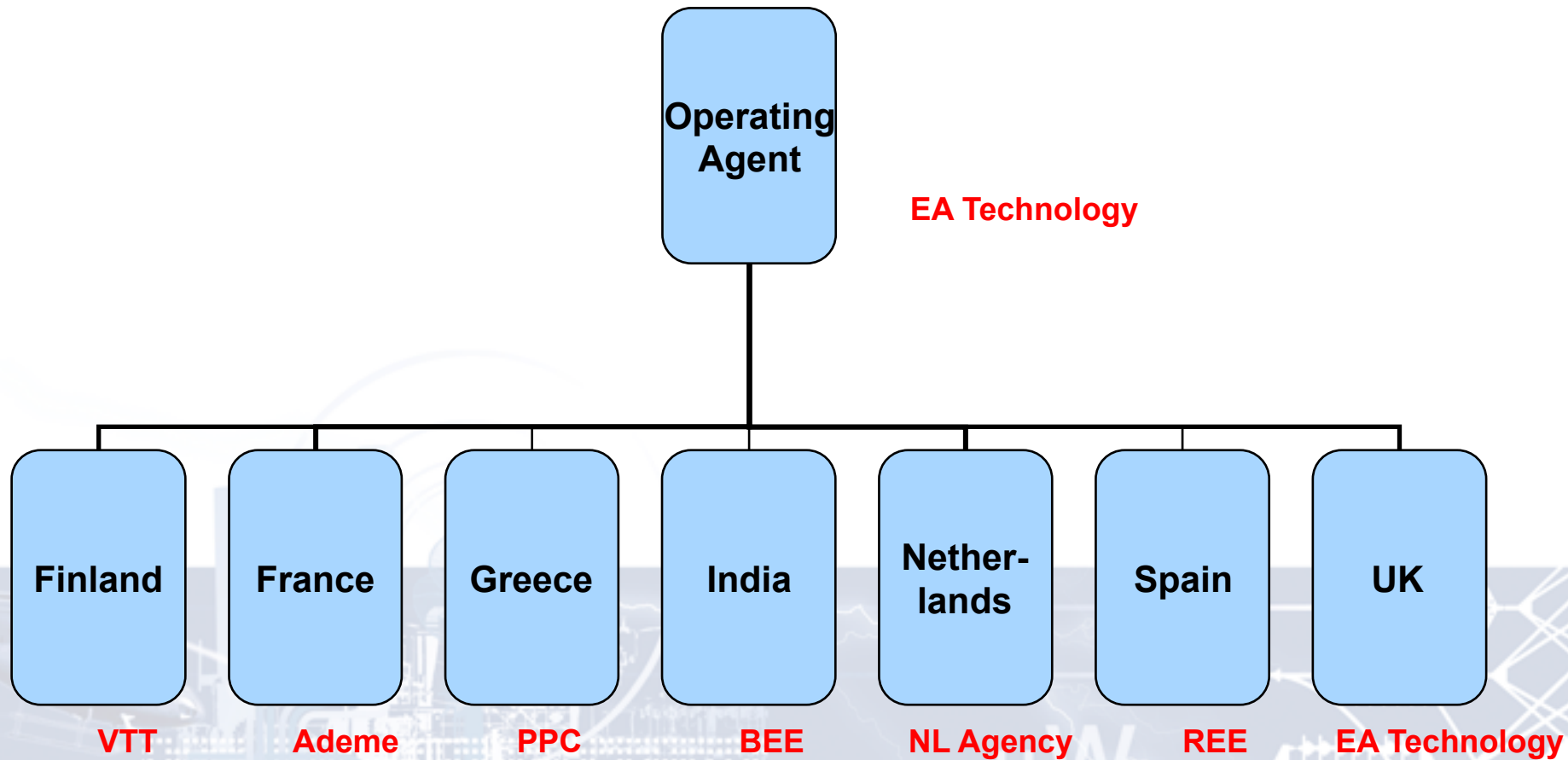


Task XIX Micro Demand Response and Energy Savings

- Scope of project
- What have we done?
- What have we learnt?



Task XIX Project Participants





Scope



- Demand response and energy saving products
 - via provision of information & remote / automatic switching
 - End-use monitoring and feedback, Time of use pricing, remote / auto switching
- Customer types
 - Residential
 - Small and medium enterprises
 - Commercial and / or industrial sites < 100kW (generally no interval meters)
- Fuel type
 - Electricity only

The project examined the business case for delivering demand response and energy savings from the perspective of the aggregator – is there a viable business opportunity?



Demand Side Management



Load level

(amount of energy consumed)

Appliance measures

Insulation

Behaviour
(information to influence energy use)

Load shape

(pattern of energy consumption)

Sustained
(long term)

Flexible
(short term)

Demand response

Remote / Automatic Switching

TOU Pricing



Two International Reports Produced



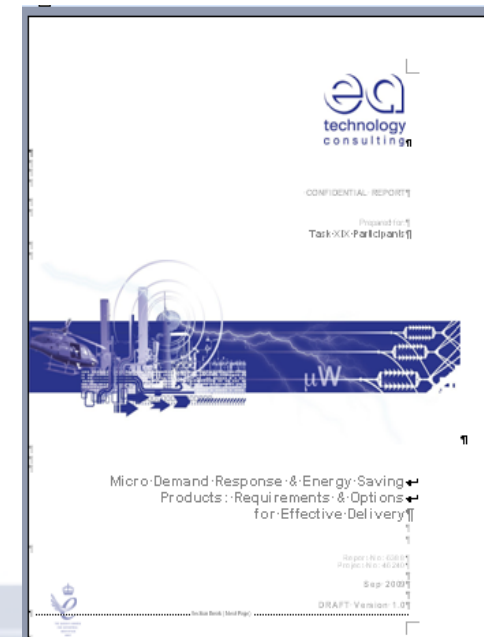
- **Micro Demand Response and Energy Saving Products: Definition of the Requirements and the Options for Effective Delivery**
- **Evaluating the Business Case for Micro Demand Response and Energy Saving**



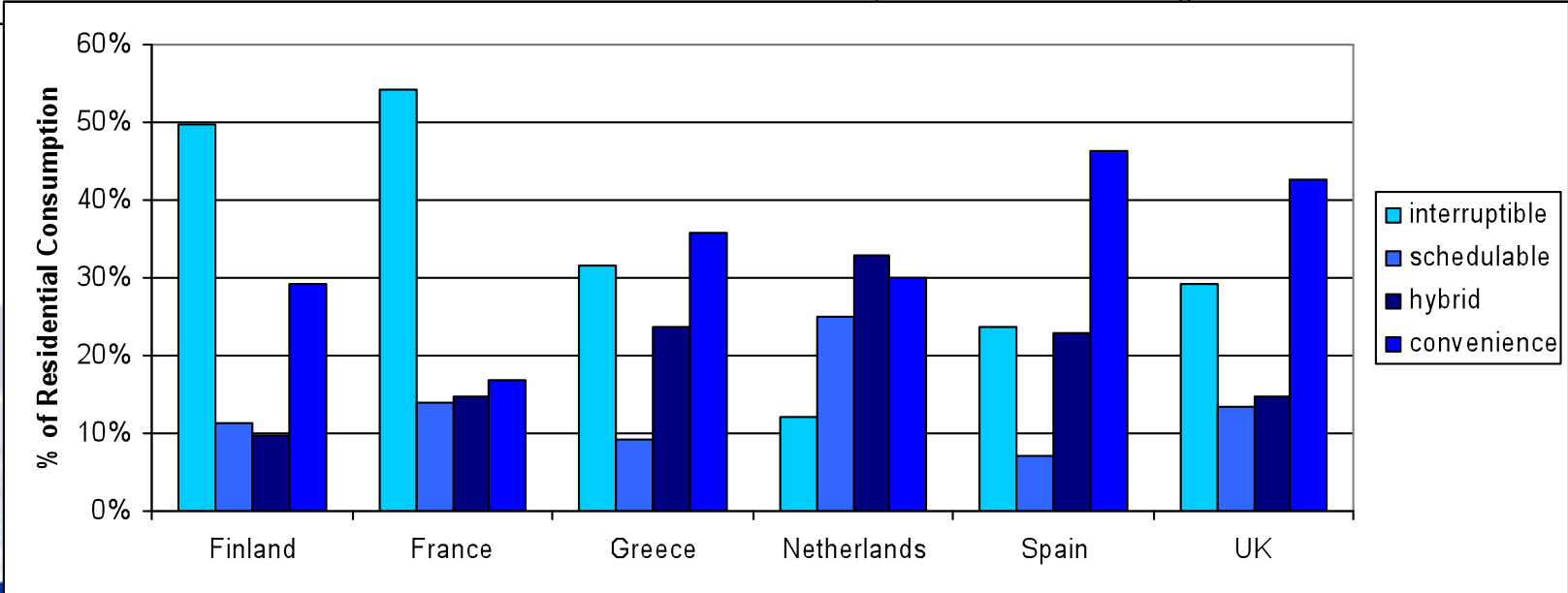
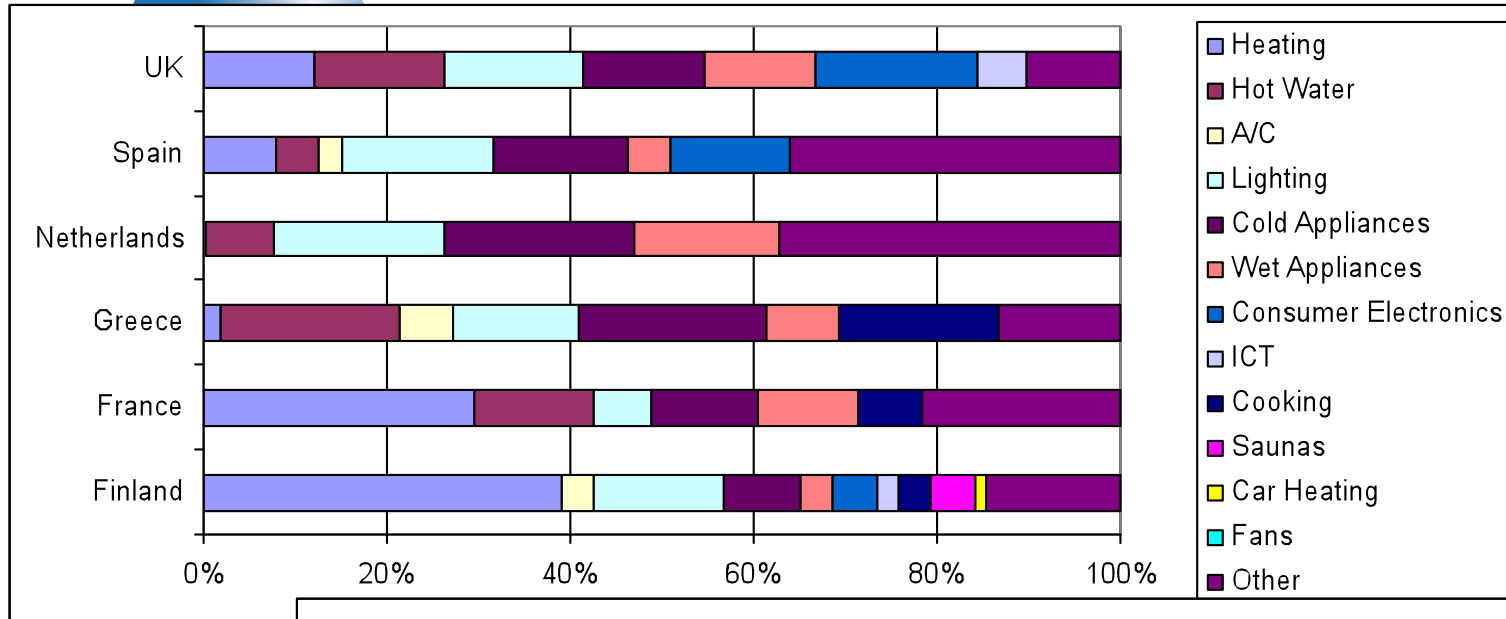
Report 1: Requirements & Options for Effective Delivery



- Overview of electricity system and trading arrangements
- Demand Response Requirements
- Review of Case Studies and Pilots
- End Use Demand Changes
- Delivery Mechanisms
- Technical Architecture Components

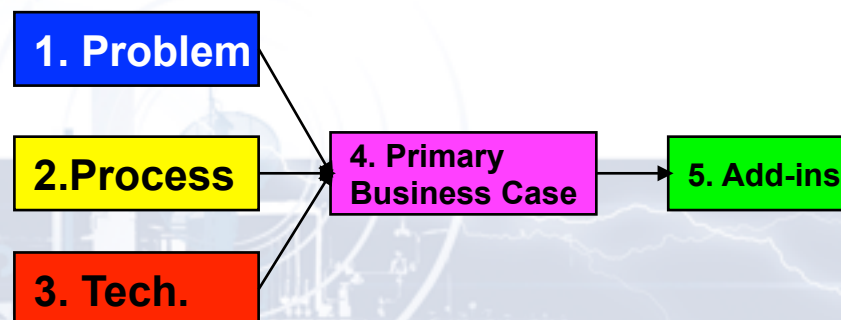
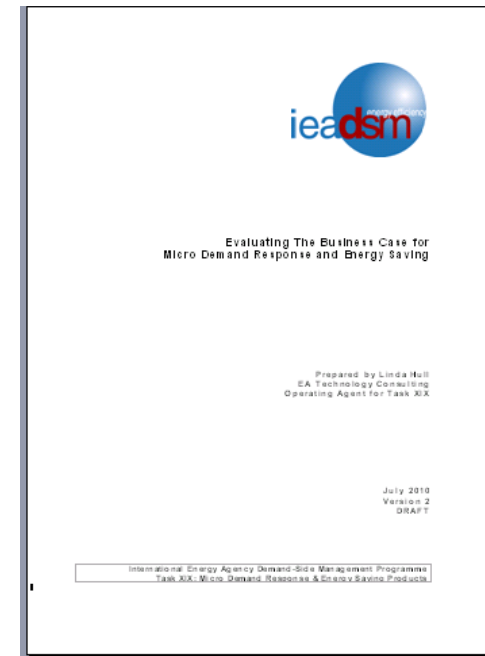


Residential Loads in Participating Countries



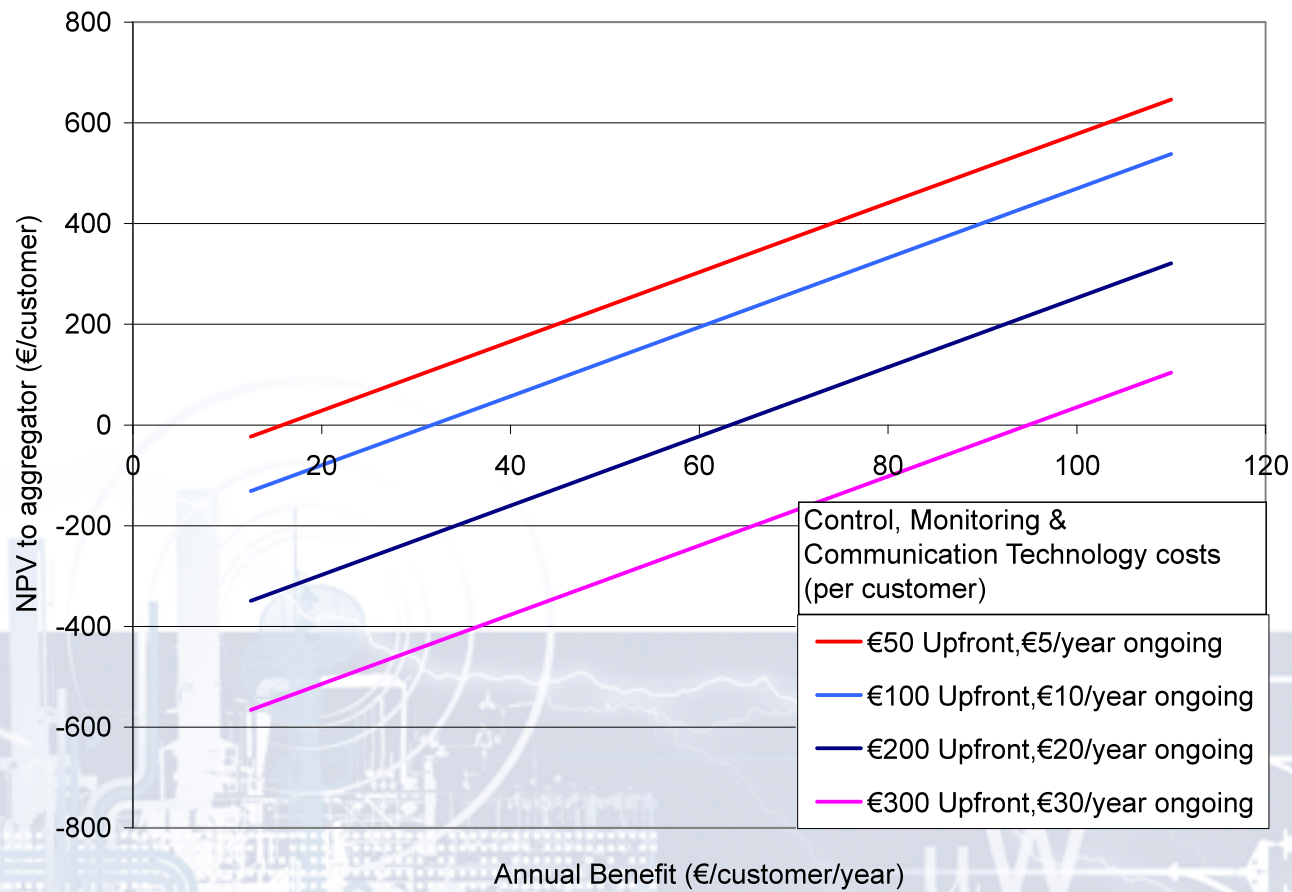
Report 2: Evaluating the Business Case

- Five Country Specific Case Studies:
 - Dynamic control of electric heater loads, Finland
 - Dynamic response of residential heating, France
 - Energy efficient air-conditioning equipment, Greece
 - Mass installation of energy efficient lighting, India
 - Direct load control of commercial air conditioning, UK





Direct load control of commercial a/c, UK





What have we learnt?



- Electricity markets are complex, with a diverse range of stakeholders that is likely to increase
- There are information gaps
 - Lack of information on the consumption habits of commercial, particularly SME, consumers
 - Lack of information on when different end uses occur, for both domestic and SME consumers
- Technologies are rapidly evolving in this area but few are mass market



What have we learnt? (2)



- Tariff-based interventions are likely to be the easiest to implement in current market arrangements, particularly for domestic consumers
- New and evolving loads, especially Air Conditioning, Electric Vehicles and Heat Pumps, present interesting opportunities for load shifting
- The degree to which consumers will be willing to engage with programmes is currently unknown



Thank you for listening!

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